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10/501,056	03/11/2005	Werner Trautwein	3988-044634	1634

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EXAMINER

ZACHARIA, RAMSEY E

ART UNIT	PAPER NUMBER
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1794

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/501,056	Applicant(s) TRAUTWEIN ET AL.	
	Examiner Ramsey Zacharia	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 26-47 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 26-46 is/are rejected.
- 7) ☒ Claim(s) 47 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 July 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>10/14/2005</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 26, 30, 31, 41, and 42 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
3. Claim 26 indefinite because it is unclear if there is a plastic coating on each side of the base material or if the plurality of outer sealing layers are disposed on only one side of the base material.
4. Claims 30 and 31 recite the limitation "the connecting layer." There is insufficient antecedent basis for this limitation in the claim. It is noted that claims 30 and 31 depend from claim 26 while the first connecting layer is introduced in claim 27.
5. The phrase "relative to a subsequent composite package" at the end of claims 41 and 42 render these claims indefinite because it is unclear how coating weights can be defined relative to the subsequent composite package. It appears that the phrase may have inadvertently been added from the discussion in the specification regarding the placement of particular layers with respect to the overall package (e.g. see the last paragraph on page 5).

Claim Language

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6. For the purpose of examination, the composite material recited in claim 26 is taken to comprise the base material layer with an outer sealing layer on either side and a barrier layer between the base material layer and each of the outer sealing layers wherein one of the barrier layers is metal.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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8. Claims 26-35, 39, 43, and 44 are rejected under 35 U.S.C. 102(b) as being anticipated by Furuya et al. (US 4,355,756).

Furuya et al. teach a container comprising a laminated sheet made up of two outer layers made of a thermoplastic resin, a paper layer, and an aluminum foil (column 2, lines 11-33). The thermoplastic resin layers read on the instant outer sealing layers; the paper layer reads on the instant base material; the aluminum foil reads on one of the instant barrier layers. Suitable thermoplastic resins include polypropylene, polyethylene terephthalate, and polyethylene (column 2, lines 58-66). A binder layer, e.g. a low density polyethylene resin, may be used to adhere the aluminum foil to both the paper and the thermoplastic resin layer (column 3, lines 37-54). The aluminum foil has a thickness of 5-150 μm (column 3, lines 66-67). In one embodiment, the laminate sheet comprises aluminum foils and thermoplastic resin layers on either side of the paper layer (Figure 5 and column 7, lines 20-30).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claim 36 is rejected under 35 U.S.C. 103(a) as being unpatentable over Furuya et al. (US 4,355,756) in view of Swartz et al. (US 5,993,593).

Furuya et al. teach all the limitations of claim 36, as outlined above, except for the use of a liquid crystalline polymer as their heat sealing thermoplastic resin.

Swartz et al. is directed to a high temperature heat sealing film comprising a liquid crystal polymer film (column 3, lines 39-45). Moreover, Swartz et al. disclose that liquid crystal films are known to provide barrier performance and may be used in food and pharmaceutical packaging (column 1, lines 46-48).

It would have been obvious to one skilled in the art to use the liquid crystal film of Swartz et al. as the heat sealing thermoplastic resin of Furuya et al. in applications where additional barrier properties are desired.

Moreover, it would have been obvious to use the liquid crystal film of Swartz et al. as the thermoplastic resin layer of Furuya et al. since it has been held that the selection of a known material (i.e. the LCP of Swartz et al.) based on its suitability for its intended use (heat sealable resin used in food packaging) supported a *prima facie* obviousness determination. See MPEP 2144.07.

11. Claim 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over Furuya et al. (US 4,355,756) in view of Gibbons et al. (US 4,701,360).

Furuya et al. teach all the limitations of claim 37, as outlined above, except for the use of an ethylene/vinyl alcohol copolymer as the heat sealing thermoplastic resin.

Gibbons et al. is directed to a heat sealable barrier laminate for use as a paperboard carton (column 1, lines 6-14). Ethylene/vinyl alcohol copolymer may be used as one of the heat seal layer (column 1, line 66-column 2, line 11). Using the polar EVOH as a heat sealing material prevents the absorption of flavor oils which would result in swelling, stress cracking, plasticization, and degradation of the heal seal (column 2, lines 21-34).

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It would have been obvious to one skilled in the art to use EVOH as the interior thermoplastic resin layer of Furuya et al. in applications wherein food articles comprising flavor oils are to be packaged to prevent the absorption of the oils and the resulting swelling, stress cracking, plasticization, and degradation of the heat seal.

Moreover, it would have been obvious to use the EVOH of Gibbons et al. as the thermoplastic resin layer of Furuya et al. since it has been held that the selection of a known material (i.e. the EVOH of Gibbons et al.) based on its suitability for its intended use (heat sealable resin used in food packaging) supported a *prima facie* obviousness determination. See MPEP 2144.07.

12. Claim 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over Furuya et al. (US 4,355,756) in view of Edwards et al. (US 6,511,688).

Furuya et al. teach all the limitations of claim 38, as outlined above, except for the use of a polyamide as the heat sealing thermoplastic resin. However, Furuya et al. do teach the use of polypropylene as their thermoplastic resin.

Edwards et al. is directed to a packaging for foodstuffs (column 1, lines 14-18). The packaging comprises a multilayer film having a heat sealing layer comprising polymers such as polypropylene and nylon (claims 20 and 26).

Edwards et al. show that polypropylene and nylon are known in the art as functionally equivalent heat seal resins. Therefore, because these two polymers were art-recognized equivalents at the time the invention was made, one of ordinary skill in the art would have found it obvious to substitute nylon for the polypropylene thermoplastic resin layer of Furuya et al.

Moreover, it would have been obvious to use the nylon of Edwards et al. as the thermoplastic resin layer of Furuya et al. since it has been held that the selection of a known material (i.e. the nylon of Edwards et al.) based on its suitability for its intended use (heat sealable resin used in food packaging) supported a *prima facie* obviousness determination. See MPEP 2144.07.

13. Claims 40-42, 45, and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Furuya et al. (US 4,355,756) in view of Farrell et al. (US 5,506,011).

Furuya et al. teach all the limitations of claims 40-42, 44, and 45, as outlined above, except for specifying the coating weight per area of the thermoplastic resin and binder layers.

Farrell et al. a package constructed from a heat sealable paperboard laminate (column 1, lines 6-11). The laminate comprises heat sealable layers having a coating weight of 6-18 lb/ream (i.e. $\sim 10\text{-}30\text{ g/m}^2$) and tie layers having a coating weight of 4-6 lb/ream (i.e. $\sim 6\text{-}10\text{ g/m}^2$) (column 3, line 60-column 4, line 6).

It would have been obvious to one skilled in the art to provide laminated sheet of Furuya et al. with thermoplastic resin layers having a coating weight of $10\text{-}30\text{ g/m}^2$ and binder layers having a coating weight of $6\text{-}10\text{ g/m}^2$ since it has been held that the selection of a known material (e.g. heat seal layers having a coating weight of $6\text{-}10\text{ g/m}^2$) based on its suitability for its intended use (e.g. heat sealing a foodstuff packaging) supported a *prima facie* obviousness determination. See MPEP 2144.07.

Allowable Subject Matter

14. Claim 47 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

15. The following is a statement of reasons for the indication of allowable subject matter.

Claim 47 is directed to a composite material comprising a paper or cardboard base material layer having plastic coatings on each side. The plastic coatings each comprise an outer sealing layer and a barrier layer. A first connecting layer is present between the base material layer and the first barrier layer and second connecting layer is present between the second barrier layer and the second outer sealing layer. The first connecting layer is thicker than the second connecting layer.

Furuya et al. represent the closest prior art. Furuya et al., while teaching that binder layers may be present between the paper, aluminum foil, and/or thermoplastic resin layers, does not teach or fairly suggest the use of a thicker binder layer between the paper and the foil than the binder layer between the foil and the thermoplastic resin.

Conclusion

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ramsey Zacharia whose telephone number is (571) 272-1518. The examiner can normally be reached on Monday through Friday from 9 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye, can be reached at (571) 272-3186. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Ramsey Zacharia/

Primary Examiner, Art Unit 1794